

(19) World Intellectual Property
Organization
International Bureau



09 FEB 2005



(43) International Publication Date
26 February 2004 (26.02.2004)

PCT

(10) International Publication Number
WO 2004/016721 A1

- (51) International Patent Classification⁷: **C11D 1/65**, 1/86, 3/48 // 1:14, 1:22
- (21) International Application Number: PCT/GB2003/003447
- (22) International Filing Date: 7 August 2003 (07.08.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
0218857.1 14 August 2002 (14.08.2002) GB
- (71) Applicant (for all designated States except MN, US):
RECKITT BENCKISER N.V. [NL/NL]; Kantoorgebouw de Appelaer, De Fruituinen 2-12, NL-2132 NZ Hoofddorp (NL).
- (71) Applicant (for MN only): **RECKITT BENCKISER (UK) LIMITED** [GB/GB]; 103-105 Bath Road, Slough, Berkshire SL1 3UH (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **DE DOMINICIS, Mattia** [IT/IT]; Reckitt Benckiser Italia, Piazza S Nicolo 12/3, I-30034 Mira (IT). **RIGHETTO, Zefferino** [IT/IT]; Reckitt Benckiser Italia, Piazza S. Nicolo 12/3, I-30034 Mira (IT).
- (54) Title: BACTERICIDE SURFACTANT COMPOSITIONS
- (57) Abstract: A detergent comprising: a) 0.001 % to 40 % w/v of a bactericidally active water-insoluble cationic compound in its salt form wherein the counterion anion has at least one of the following properties: 1) can generate a water-insoluble salt form, by water-insoluble we mean that less than 10 % w/v dissolves in deionised water at 20 °C, preferably less than 1 % w/v; 2) has a MW of less than 300, (preferably less than 200) but greater than 50 (preferably greater than 75), 3) the dissociation constant (K_d) of the salt is less than 10⁻³, preferably less than 10⁻⁶; b) 0.001 to 40 % w/v of an anionic surfactant; and c) up to 98 % w/v of water.
- (74) Agents: **BROWN, Andrew, Stephen et al.**; Reckitt Benckiser plc, Group Patents Department, Dansom Lane, Hull HU8 7DS (GB).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Declarations under Rule 4.17:**
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations
 - of inventorship (Rule 4.17(iv)) for US only
- Published:**
- with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2004/016721 A1